# **HORN**

# **HORN**

- 1. General Description
- 2. Relay and Fuse
- 3. Horn System
- 4. Horn
- 5. Horn Switch

#### **HORN > General Description**

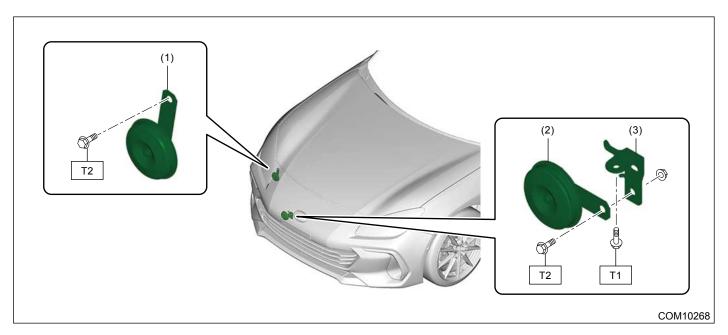
#### **CAUTION**

- When performing service operation, refer to "Repair Contents" in "General Description". 

  Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- Refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. Ref. to AIRBAG SYSTEM>General Description.

#### **HORN > General Description**

#### COMPONENT



(1) Horn ASSY Lo

(3) Horn bracket

Tightening torque: N·m (kgf-m,

ft-lb)

(2) Horn ASSY Hi

T1: 13 (1.3, 9.6)
T2: 18 (1.8, 13.3)

# **HORN > General Description**

# **PREPARATION TOOL**

#### 1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	_	SUBARU SELECT	Used for setting of each function and
		MONITOR 4	troubleshooting for electrical system.



# Note:

- For detailed operation procedures, refer to "Help" of application.
- Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).

# 2. OTHER

	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

# **HORN > Relay and Fuse**

#### **LOCATION**

For the location, refer to "FUSE AND RELAY" in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay.

#### Note:

For details of relay and fuse, refer to "DC POWER SUPPLY CIRCUIT". Ref. to WIRING SYSTEM>Power Supply Circuit.

# **HORN** > Relay and Fuse

#### INSPECTION

#### 1. CHECK FUSE

- 1. Remove the fuse and inspect visually.
- **2.** If the fuse is blown out, replace the fuse.

#### 2. CHECK RELAY

**1.** Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 3	Always	1 MΩ or more	ZD-*AJ
1 — 3	Apply battery voltage between terminals 2 and 4.	Less than $1~\Omega$	3-0 0-1 3 4 2 4 - 000 - 2 COM10276

2. Replace the relay if the inspection result is not within the standard value.

# **HORN > Horn System**

# **WIRING DIAGRAM**

For the wiring diagram, refer to "Horn System" in the wiring diagram. Ref. to WIRING SYSTEM>Horn System>WIRING DIAGRAM.

# **HORN > Horn System**

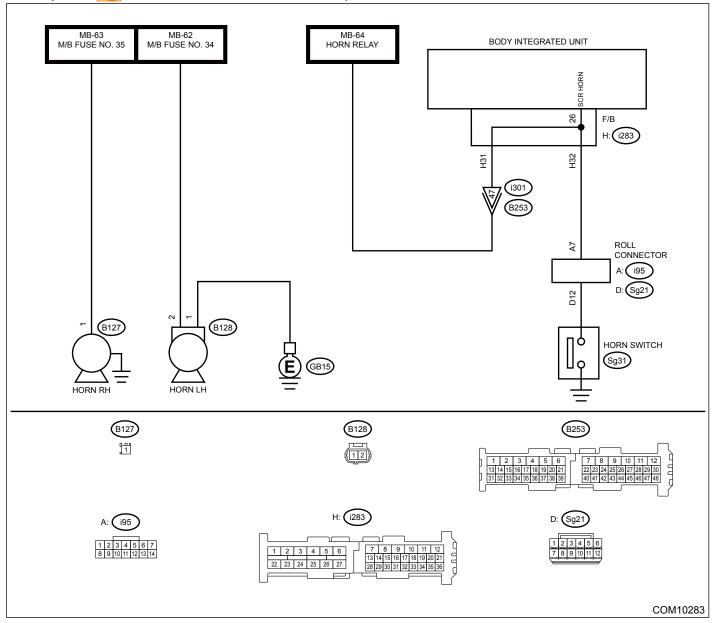
#### **INSPECTION**

#### 1. TROUBLE SYMPTOM

Horn does not sound

#### Wiring diagram:

Horn system Ref. to WIRING SYSTEM>Horn System>WIRING DIAGRAM.



#### 1. CHECK FUSE.



Check the horn fuse inside the fuse box. Ref. to HORN>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the check result OK?



**Go to 2.** 



Replace the appropriate fuse.

#### 2. CHECK HORN RELAY.



Check the relay inside the fuse box. Ref. to HORN>Relay and Fuse>INSPECTION > CHECK RELAY.

Is the check result OK?



**Go to 3.** 



Replace the horn relay.

#### 3. CHECK HORN.



- **1.** Turn the ignition switch to ON.
- 2. Using the Subaru Select Monitor, perform [Active Test] in [Body Control], and check the horn sound.

  Ref. to BODY CONTROL(DIAGNOSTICS)>Active Test.

Does the horn operate properly?



**Go to 6.** 



@ Go to 4.

#### 4. CHECK HARNESS.



- **1.** Turn the ignition switch to OFF.
- **2.** Remove the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit>REMOVAL.
- 3. Check the component harness.

**Connector & terminal** 

Horn relay and body integrated unit

Horn relay — F/B No. 26:

Horn assembly Lo

M/B fuse No. 35 (downstream side) — (B127) No. 1:

Horn assembly Hi

M/B fuse No. 34 (downstream side) — (B128) No. 2: (B128) No. 1 — Chassis ground:

Is harness normal?







Repair or replace the defective part.

# 5. CHECK HORN.



Check the horn assembly. Ref. to HORN>Horn>INSPECTION.

Is the horn normal?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS) > Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Replace the horn assembly. Ref. to HORN>Horn.

#### 6. CHECK HARNESS.



- 1. Remove the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit>REMOVAL.
- **2.** Check the harness between the joint fuse box and roll connector.

#### **Connector & terminal**

F/B No. 26 — (i95) No. 7:

Is harness normal?



@ Go to 7.



Repair or replace the defective part.

#### 7. CHECK HORN SWITCH.



Check the horn switch. Ref. to HORN>Horn Switch>INSPECTION.

Is the horn switch normal?



@ Go to 8.



Replace the satellite switch assembly or the driver's airbag module.

- Satellite switch assembly: Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Switch.
- Driver's airbag module: Ref. to AIRBAG SYSTEM>Driver's Airbag Module.

#### 8. CHECK STEERING ROLL CONNECTOR.



Check the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>INSPECTION>UNIT INSPECTION>STEERING ROLL CONNECTOR CIRCUIT (EXCEPT FOR AIRBAG CIRCUIT).

Is the steering roll connector OK?



Check the connector for temporary poor contact.



Replace the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector.

# **NOTE**

For operation procedures of components of the horn system, refer to the following sections.

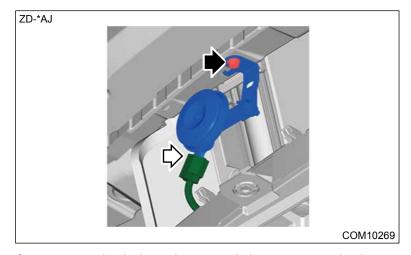
- Horn assembly: Ref. to HORN>Horn.
- Horn switch: Ref. to HORN>Horn Switch.

#### **REMOVAL**



#### 1. HORN ASSEMBLY HI

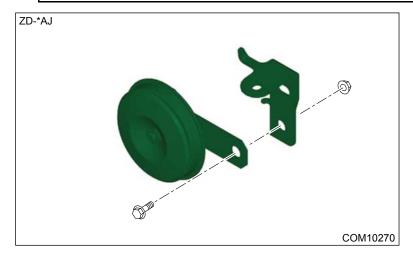
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- **2.** Remove the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>REMOVAL > BUMPER FACE.
- 3. Remove the horn sub assembly Hi.
  - (1) Disconnect the connector.
  - (2) Remove the bolt, and remove the horn sub assembly Hi.



4. Remove the bolt and nut, and then remove the horn assembly Hi from the horn bracket.

#### Note:

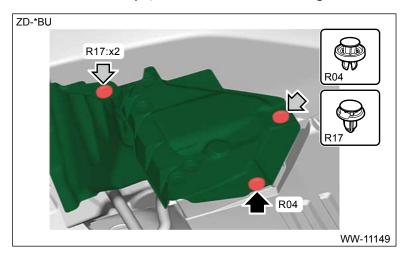
Perform this procedure only when required.



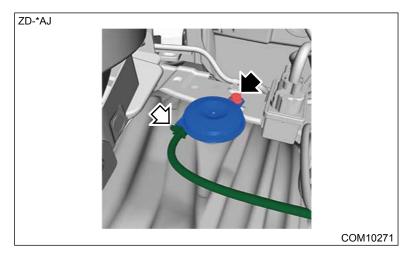
#### 2. HORN ASSEMBLY LO

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- 2. Lift up the vehicle.

3. Remove the clips, and turn over the mud guard front RH.



- 4. Remove the horn assembly Lo.
  - (1) Disconnect the connector.
  - (2) Remove the bolt, and remove the horn assembly Lo.



#### HORN > Horn

#### **INSTALLATION**

#### 1. HORN ASSEMBLY HI

1. Install the horn assembly Hi to the horn bracket.

#### **Tightening torque:**

18 N·m (1.8 kgf-m, 13.3 ft-lb)

2. Install the horn sub assembly Hi, and connect the connector.

#### **Tightening torque:**

13 N·m (1.3 kgf-m, 9.6 ft-lb)

- 3. Install the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>INSTALLATION > BUMPER FACE.
- **4.** Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

#### 2. HORN ASSEMBLY LO

1. Install the horn assembly Lo, and connect the connector.

#### **Tightening torque:**

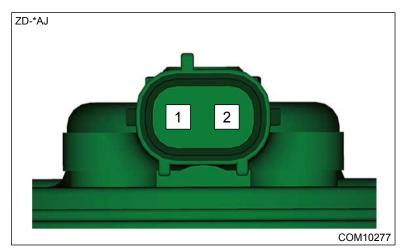
18 N·m (1.8 kgf-m, 13.3 ft-lb)

- 2. Install the mud guard front RH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
- 3. Lower the vehicle.
- 4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

#### HORN > Horn

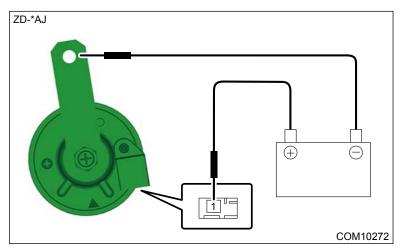
#### **INSPECTION**

- 1. Check the horn sounds when applying the battery voltage to the horn assembly.
  - Horn assembly Hi side



Terminal No.	Inspection conditions	Specification
1 (+) - 2 (-)	Apply battery voltage.	Sounds

• Horn assembly Lo side



Terminal No.	Inspection conditions	Specification
1 (+) — Horn case (-)	Apply battery voltage.	Sounds

2. If it does not operate normally, replace the horn assembly.

#### **HORN > Horn Switch**

#### **NOTE**

Horn switch is a unit with the driver's airbag module.

For the horn switch operation, refer to "Driver's Airbag Module" in the "AIRBAG SYSTEM" section. Ref. to AIRBAG SYSTEM > Driver's Airbag Module.

**HORN > Horn Switch** 

# **INSPECTION**

# 1. CHECK HORN SWITCH

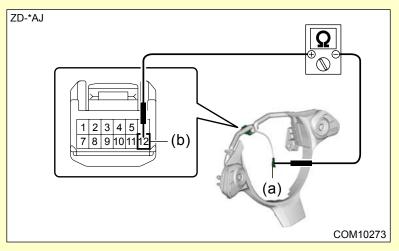
#### Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

# 1. CHECK HORN SWITCH TERMINAL.



- 1. Turn the ignition switch to OFF.
- 2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 3. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
- **4.** Measure the resistance between connectors.



- (a) Ground terminal
- (b) Horn switch terminal

Terminals	Standard
Horn switch terminal — ground terminal	Less than 1 Ω

Is the measured value within the standard value?



**60 to 2.** 

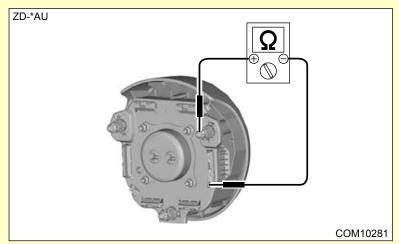


It is possible that there is an open circuit between horn switch terminal and ground terminal. Replace the satellite switch assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Switch.

# 2. CHECK DRIVER'S AIRBAG MODULE.



Measure the resistance between horn plate and snap pin hook.



Terminals	Standard
Horn plate — Snap pin hook	1 M $\Omega$ or more

Is the measured value within the standard value?







Replace the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module.

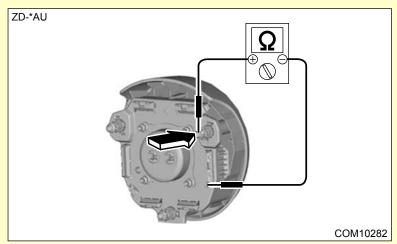
# 3. CHECK DRIVER'S AIRBAG MODULE.



Measure the resistance between horn plate and snap pin hook with the snap pin hook pressed-in firmly.

#### **Caution:**

Measure at all three positions of the snap pin hook.



Terminals	Standard
Horn plate — Snap pin hook	Less than 1 Ω

Is the measured value within the standard value?



Driver's airbag module is normal.



Replace the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module.